IN THE CLAIMS

Please amend Claims 37 and 38 as indicated below.

Please cancel Claims 1-16, 36, 40 and 41 as indicated, without prejudice and without disclaimer of subject matter.

1-17. Canceled.

18. (Original) A method comprising:

applying forward error coding to a signaling message to generate a coded fast signaling message;

MPSK mapping the coded signaling message to produce an MPSK mapped coded signaling message;

mapping the MPSK mapped coded signaling message onto a plurality of sub-carriers within an OFDM frame comprising a plurality of OFDM symbols;

encoding symbols of the MPSK mapped coded signaling message using Differential Space-Time Block Coding (D-STBC) in a time direction to generate encoded symbols; and

transmitting the encoded symbols on a plurality of transmit antennas, with the encoded symbols being transmitted at an increased power level relative to other symbols within the OFDM frame as a function of channel conditions.

19. (Original) A method according to claim 18 wherein the encoded symbols is transmitted in a scattered pattern.

20. (Original) A method according to claim 18 wherein transmitting the encoded symbols on a plurality of antennas comprises:

on a selected sub-carrier, each antenna transmitting a respective plurality N of encoded symbols over N consecutive OFDM symbols, where N is the number of

antennas used to transmit, for a total of NxN transmitted encoded symbols, the NxN symbols being obtained from D-STBC encoding L symbols of the MPSK mapped coded signaling stream, where L,N determine an STBC code rate.

21. (Original) A method according to claim 20 further comprising:

transmitting a set of pilot sub-carriers in at least one OFDM symbol;

using the pilot sub-carriers as a reference for a first set of D-STBC encoded symbols transmitted during subsequent OFDM symbols.

22. (Original) A method according to claim 21 wherein transmitting a set of pilot sub-carriers in at least one OFDM frame comprises:

transmitting a plurality of pilots on each antenna on a respective disjoint plurality of sub-carriers.

23. (Original) A method according to claim 22 wherein each disjoint plurality of sub-carriers comprises a set of sub-carriers each separated by N-1 sub-carriers, where N is the number of antennas.

24. (Original) A method according to claim 22 wherein pilot sub-carriers are transmitted for a number of consecutive OFDM frames equal to the number of transmit antennas.

25. (Original) A method according to claim 18 wherein the signaling message contains an identification of one or more receivers who are to receive data during a current TPS frame.

26. (Original) An OFDM transmitter adapted to implement a method according to claim 18.

27. (Original) An OFDM adapted to implement a method according to claim 20.

28. (Previously Presented) A receiving method for an OFDM receiver comprising:

receiving on at least one antenna an OFDM signal containing received D-STBC coded MPSK mapped coded signaling message symbols;

recovering received signaling message symbols from the OFDM signal(s);

determining from the signaling message symbols where a current OFDM transmission contains data to be recovered by the receiver;

upon determining the current OFDM transmission contains data to be recovered by the receiver:

a) re-encoding, MPSK mapping and D-STBC coding the received coded signaling message symbols to produce re-encoded D-STBC coded MPSK mapped coded signaling message symbols;

b) determining a channel estimate by comparing the received D-STBC coded mapped coded signaling message symbols with the re-encoded D-STBC coded MPSK mapped coded signaling message symbols.

29. (Original) A method according to claim 28 wherein a channel estimate is determined for each location (in time, frequency) in the OFDM signal containing D-STBC coded MPSK mapped coded signaling message symbols, the method further comprising interpolating to get a channel estimate for remaining each location (in time, frequency) in the OFDM signal.

30. (Original) A method according to claim 29 further comprising:

receiving pilot symbols which are not D-STBC encoded which are used as a reference for a first D-STBC block of D-STBC coded MPSK mapped coded signaling message symbols.

31. (Original) A method according to claim 28 further comprising:

extracting the signaling message.

32. (Original) An OFDM receiver adapted to implement the method of claim 28.

33. Canceled.

34. (Original) An article of manufacture comprising a computer-readable storage medium, the computer-readable storage medium including instructions for implementing the method of claim 18.

35. (Original) An article of manufacture comprising a computer-readable storage medium, the computer-readable storage medium including instructions for implementing the method of claim 28.

36. Canceled.

37. (Currently Amended) The method of claim ~~36~~ 38 comprising the further step of applying a fast algorithm to compute a Discrete Fourier Transform based on the scattered pilot pattern to extract the combined pilot symbols and fast signaling message and only proceeding to recover the channel response if the fast signaling message indicates a current transmission contains content for the OFDM receiver.

38. (Currently Amended) ~~The method of claim 36~~ A method of determining a channel response from an Orthogonal Frequency Division Multiplexing (OFDM) frame received at an OFDM receiver, the OFDM frame containing an encoded fast signaling message in the form of encoded symbols within the OFDM frame, the method comprising the steps of:

processing the encoded symbols based on a scattered pilot pattern to recover the encoded fast signaling message as a recovered encoded fast signaling message;

re-encoding the recovered fast signaling message so as to produce known pilot symbols in the scattered pilot pattern; and

determining a channel response for the encoded symbols using decision feedback,

wherein processing the encoded symbols comprises:

differentially decoding the encoded symbols using Differential Space-Time Block Coding (D-STBC) decoding to recover the encoded fast signaling message;

applying Forward Error Correction decoding to the encoded fast signaling message to recover a fast signaling message; and

analyzing the fast signaling message to determine whether it includes a desired user identification;

if the fast signaling message includes the desired user identification, re-encoding the recovered fast signaling message comprises:

re-encoding the fast signaling message using Forward Error Correction coding to generate the encoded fast signaling message, and re-encoding the encoded fast signaling message using D-STBC.

39-41. Canceled.